

REMARKS

In the Office Action, the Examiner indicated that claims 1 through 21 are pending in the application. The Examiner rejected claims 1-5, 7-17, and 19-21, and objected to claims 6 and 18.

Claim Rejections, 35 U.S.C. §102

In item 2 on pages 2-5 of the Office Action, the Examiner rejected claims 1-5, 7-9, 13-17 and 20 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,411,680 to Rousse ("Rousse").

The Present Invention

The present invention relates to apparatus and methods for effectively powering up an electronic circuit using telephone line power, without causing "lock-up", a condition that occurs if an electronic circuit (in particular, a CMOS circuit) is powered up by the telephone line improperly. In particular, the digital logic (CMOS) in telephone line powered electronic circuits can appear as a variable resistor that depends upon the voltage across the telephone line. The variable resistor of the digital logic can appear as a short to the telephone line power, thereby preventing the line powered electronic circuit from being powered at acceptable voltage levels. As a result of being improperly powered, the digital logic enters a lock up condition and the telephone line powered electronic circuit fails to operate properly.

The present invention solves this problem by first conditioning the tip/ring voltage so that voltage detection circuitry monitors this conditioned voltage rather than the tip/ring voltage.

U.S. Patent No. 6,411,680 to Rousse

U.S. Patent No. 6,411,680 to Rousse teaches an over-voltage protection circuit, whereby a sensor for detecting a DC voltage above a first level is connected between terminals of a telephonic apparatus. It is directed to chips using bipolar, high voltage chips, i.e., not to CMOS. When the sensor detects a DC voltage between the terminals that is above a first level, it prevents the switch from connecting the circuitry between the terminals. This protects telephonic circuitry and apparatus from DC voltages on the order of 300-500 volts. Specifically, Rousse identifies prior art whereby telephonic apparatus are designed to be capable of surviving voltages above the normal working range of the telephone apparatus, even up to 120 volts, but Rousse addresses the problem that might occur when voltages higher than 120 volts are applied to the telephone line, and does so by providing over-voltage protection, which senses the presence of a DC voltage level above an over-voltage amount and prevents connection of the telephonic circuitry if the over-voltage amount has been exceeded.

The Cited Prior Art Does Not Anticipate the Claimed Invention

The MPEP and case law provide the following definition of anticipation for the purposes of 35 U.S.C. §102:

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP §2131 citing *Verdegaal Bros. v. Union Oil Company of California*, 814 F.2d 628, 631, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987)

The Examiner Has Not Established a *prima facie* Case of Anticipation

As noted above, the present claimed invention includes the step of (in method claim 1) and an apparatus for (e.g., claim 13) conditioning the tip/ring voltage (the voltage across the telephone line) before detecting the voltage across the telephone line, i.e., instead of detecting the line voltage, in accordance with the present invention, the line voltage is conditioned (see Fig. 3). Figure 3 illustrates the conditioning circuit comprising a zener diode in combination with a capacitor. In addition, there is a resistor (in this example a 5 M ohm resistor in series with the zener diode. The 5 M ohm resistor is important to maintain a greater than 5 M ohm impedance while in the on-hook condition. The zener diode operates to regulate the voltage to 5-6 volts with less than 1 μ A if current from the tip/ring line. Then, the conditioned voltage is detected to identify certain characteristics, e.g., the reaching of a minimum conditioned voltage level (claim 2).

Rousse is devoid of any such teaching. As noted above, Rousse is a simple over-voltage protection device that seeks to protect against the application of extremely high voltages to circuitry that is designed to handle over-voltages, but not those at high levels such as 300-500 volts. Nothing in Rousse suggests, let alone teaches, the conditioning of the line voltage and then detection of the conditioned line voltage to determine characteristics thereof and applying telephone line power based on these characteristics. Without such teachings, Rousse does not anticipate the present claimed invention.

Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 1-5, 7-9, 13-17, and 20 under 35 U.S.C. §102(e) as being anticipated by Rouse.

Regarding claim 12, claim 12 specifically requires the application of the present invention to a data access array having a CMOS electronic circuit. Rouse is devoid of any such teaching.

Accordingly, each of the independent claims, and all claims depending therefrom, patentably define over Rouse and are in condition for allowance.

Rejection of Claims 10-11 and 19 under 35 U.S.C. §103(a)

On pages 5-6 of the Office Action, the Examiner rejected claims 10-11 and 19 under 35 U.S.C. §103(a) as being unpatentable over Rouse in view of U.S. Patent No. 5,471,524 to Colvin et al., on pages 6-7, the Examiner rejected claim 12 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,783,999 to Price et al. in view of Rouse, and on page 7 the Examiner rejected claim 21 under 35 U.S.C. §103(a) as being unpatentable over Rouse in view of U.S. Patent No. 6,204,706 to Horvath.

The Examiner has not Established a *prima facie* Case of Obviousness

As set forth in the MPEP:

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to modify the reference or to combine reference teachings.

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As noted above, each of the independent claims of the present invention require the conditioning of the tip/ring voltage and then the monitoring of the conditioned voltage for certain characteristics, prior to providing power to an electronic circuit. None of the references cited by the Examiner in making the obviousness rejections under 35 U.S.C. §103 (Colvin et al., Horvath, or Price et al.) suggest the claimed conditioning step of the present invention. Each detect the direct tip/ring voltage and are concerned with high voltage bipolar chips. They do not provide a solution for CMOS technologies, as does the claimed invention. Without such a suggestion, it is improper to reject the claims under 35 U.S.C. §103 as indicated by the Examiner. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 10-11 and 19 under 35 U.S.C. §103.

Allowable Subject Matter

On page 7 of the Office Action, the Examiner indicated that claims 6 and 18 are objected to, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 6 and 18 have been rewritten in independent form, substantially per the Examiner's suggestion and are thus in allowable condition. Specifically, claim 1 has been added to claim 6, and claim 13 has been added to claim 18. The intervening claims did not need to be added since they were already included in the objected-to claims.

Conclusion

The present invention is not taught or suggested by the prior art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims. An early Notice of Allowance is earnestly solicited.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 19-5425.

Respectfully submitted

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Date



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